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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/656,478
Filing Date: September 05, 2003
Appellant(s): MOSTAFAVI, HASSAN

Gerald Chan
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 25, 2011 appealing from the Office action mailed August 5, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-66 stands rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

2003/0086596	Hipp et al	05-2003
5535289	Ito	07-1996
6075557	Holliman et al	06-2000
5134472	Abe	07-1992
6311084	Cormack et al	10-2001
6563945	Holm	05-2003
2004/0077952	Rafter et al	04-2004
7062078	Weese et al	06-2006
2003/0026758	Baker	02-2003
2003/0026758	Baker	07-2002
5109435	Lo et al	04-1992

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 6-9, 12-14, 18, 20, 23-27, 31-36, and 61-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hipp by (US Patent Application No.: 2003/0086596) in view of Ito (US Patent No.: 5,535,289).

As to claim 1, Hipp discloses a method of determining a position of a target region (track the position of a specific vertebra, [0035], lines 1-3) in a medical procedure (clinical assessment of spinal stability, [0002], lines 1-2), comprising: acquiring an input image of a target region (see Fig 4a); enhancing a feature of the input image ([0035], lines 5-7) based on a motion of a moving object (see [p][0040], where imaged captured during a motion maneuver are averaged), wherein the act of enhancing is performed such that an image of the moving object is enchained relative to an image of a relatively stationary object if the moving object moves relative to an image of relatively stationary object (note that the background is usually stationary, therefore the object would be enhanced relative to the a relatively stationary object, see Fig 4a), wherein the act of enhancing is accomplished at least in part by performing image averaging ([0040], lines 4-11); registering the input image with a template; and determining a position of the target region in the input image based on the registering (see [0042], lines 11 -15, where the input image is registered with a search model or template to locate similar

regions in the input image (Note that the preamble of the claim is not given any weight since the limitations such as medical procedure is not included in the body of the claim, i.e. intended use). Note the discussion above Hipp does not teach wherein the act of enhancing is accomplished at least in part by performing image subtraction. Ito teaches a method for reducing noise in subtracted image (column 2, lines 1-3) wherein enhancing is accomplished at least in part by performing image subtraction (see Fig 1a). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the method of reducing noise of Ito to the method of identifying and tracking motion of Hipp for reducing noise in image data whereby enhancing the image data because noise reduction is a basic process in image analysis and processing and makes for better image.

As to claim 22, all the limitations are discussed in claim 1 above except means for enhancing a moving object in the input image (note that the vertebrae has muscle attach to it causing it to move ([0004], lines 3-5). Also, claim 22 differ from claim 1 only in that claim 22 is a system claim whereas claim is 1 method claim. Thus, claim 22 is analyzed as previously discussed with respect to claim 1 above.

As to claim 31, all the limitations are discussed in claim 1 above except "set of instruction" is additively recited in the preamble and the limitation "means for enhancing a moving object in the input image". Hipp teaches a computer readable medium

comprising: set of instruction (software, [0027], line 7) and means for enhancing a moving object in the input image (note that the vertebrae has muscle attach to it causing it to move ([0004], lines 3-5). Also, claim 30 differ from claim 1 only in that claim 30 is a computer readable medium claim whereas claim is 1 method claim. Thus, claim 30 is analyzed as previously discussed with respect to claim 1 above.

As to claim 2, Hipp teaches the method wherein the enhancing comprises determining a composite image of previously acquired input images ([0040], lines 4-11).

As to claim 3, Hipp teaches the method wherein the determining a composite image comprises performing an image averaging on the previously acquired input images (see [0040], lines 4-11, where adjacent images are averaged which includes previously acquired images).

As to claim 7, Hipp teaches the method further comprising selecting the template from a plurality of templates ([0046], lines 1-3).

As to claim 8, Hipp teaches the method wherein the selecting comprises choosing a template from the plurality of templates that best matches at least a portion of the input image (see [0046], lines 6-9).

As to claim 9, Hipp teaches wherein the selecting comprises: comparing the input

image with at least a subset of the templates; and selecting the template that best matches at least a portion of the input image (see [0046], lines 6-9).

As to claim 12, Hipp teaches the method wherein the determining a position of the target region comprises determining a position of the image in the input image that best matches the template (see column 4, lines 1-3, where the rotation and translation of the template that gives the best match describes the position of the target area).

As to claim 13, Hipp teaches the method wherein the input image comprises a fluoroscopic image (e.g radiographic images; [0042], lines 9).

As to claim 14, Hipp teaches the method further comprising performing a medical procedure based on the determined position of the target region (e.g. clinical assessment of spinal stability, [0002], lines 1-2).

As to claim 18, Hipp teaches the method wherein the target region comprises at least a part of an animal body (e.g. vertebrae; [0027], line 3).

As to claim 20 Hipp teaches a method wherein the at least a portion of an animal body comprises a bone (e.g. vertebrae; [0027], line 3).

Claim 23 differ from claim 2 only in that claim 22 is a system claim whereas, claim is 2 method claim. Thus, claim 23 is analyzed as previously discussed with respect to claim 2 above.

Claim 24 differ from claim 7 only in that claim 24 is a system claim whereas, claim is 7 method claim. Thus, claim 24 is analyzed as previously discussed with respect to claim 7 above.

Claim 25 differ from claim 8 only in that claim 25 is a system claim whereas, claim is 8 method claim. Thus, claim 25 is analyzed as previously discussed with respect to claim 8 above.

Claim 26 differ from claim 13 only in that claim 26 is a system claim whereas, claim is 13 method claim. Thus, claim 26 is analyzed as previously discussed with respect to claim 13 above.

Claim 27 differ from claim 14 only in that claim 27 is a system claim whereas, claim is 14 method claim. Thus, claim 27 is analyzed as previously discussed with respect to claim 14 above.

Claim 32 differ from claim 2 only in that claim 32 is a computer readable medium claim whereas, claim is 2 method claim. Thus, claim 32 is analyzed as previously discussed with respect to claim 2 above.

Claim 33 differ from claim 7 only in that claim 33 is a computer readable medium claim whereas, claim is 7 method claim. Thus, claim 33 is analyzed as previously discussed with respect to claim 2 above.

Claim 34 differ from claim 8 only in that claim 34 is a computer readable medium claim whereas, claim is 8 method claim. Thus, claim 34 is analyzed as previously discussed with respect to claim 8 above.

Claim 35 differ from claim 13 only in that claim 35 is a computer readable medium claim whereas, claim is 13 method claim. Thus, claim 35 is analyzed as previously discussed with respect to claim 13 above.

Claim 36 differ from claim 14 only in that claim 36 is a computer readable medium claim whereas, claim is 14 method claim. Thus, claim 36 is analyzed as previously discussed with respect to claim 14 above.

As to claim 61, Hipp teaches the method, wherein the image of the moving object is enhanced by reducing an appearance of the stationary object (see Fig 4, [p][0041] and [p][0054]).

As to claim 62, Hipp teaches the method wherein when the moving object moves relative to the stationary object, the act of enhancing causes the moving object to appear relatively more noticeable than the stationary object (note that since each image is using motion to enhance the image, the boundaries of the object would definitely be more noticeable – see column 1, lines 64-67).

As to claim 63, note the discussion of claim 1 and 63 above.

As to claim 21, Hipp teaches the method of claim 1, wherein the target region comprises at least a part of a non-animal object. Although, Hipp does not specifically discloses the target region being part of a non-animal object, it would have been obvious that the system is capable of determining the position of a target region of non-animal objects, such system used in taking and aligning X-ray image or for targets like radioactive elements or dye, all of which are very conventional in the processing and analysis of medical images (Official Notice).

As to claim 4, note the discussion above Ito teaches the method wherein the enhancing further comprises subtracting the composite image from the input image (see Fig 1a).

As to claim 6, note the discussion above, Ito teaches the method wherein the image averaging is performed based on a weighted average (column 3, line 23-27).

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hipp by (US Patent Application No.: 2003/0086596) further in view of Holm (US Patent No.: 6,563,945).

As to claim 5, Hipp does not teach the image averaging is performed using a boxcar averaging technique. Holm teaches a method for tone and color reproduction (column 1, lines 14-15) wherein image averaging is performed using a boxcar averaging technique (column 7, lines 17-18). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the method for tone and color reproduction of Holm to the identifying and tracking motion of Hipp for blurring or smoothing image data.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hipp by (US Patent Application No.: 2003/0086596) further in view of Rafter et al (Pub No.: 2004/0077952).

As to claim 10, Hipp does not teach the method wherein the selecting comprises comparing the input image with the template that is generated at approximately a same time-point or a same phase of a physiological cycle as the input image. Rafter teaches a method for controllably arranging a plurality of images ([0022], lines 2-3) including

comparing the input image with the template that is generated at approximately a same time-point or a same phase of a physiological cycle as the input image (see [0105], where motion loop images, for e.g. image acquired during systolic or diastolic of a patient heart cycle, are synchronized compared and use for diagnostic purposes). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the method for controllably arranging a plurality of images of Rafter to the identifying and tracking motion of Hipp to enable a diagnostician to compare tissue movement throughout a patient's heart cycle over different stages of stress [0105].

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hipp by (US Patent Application No.: 2003/0086596) in view of Weese et al (US Patent No.: 7,062,078).

As to claim 11, Hipp does not teach the method wherein the selecting comprises: determining a previously registered template ; and comparing the input image with the template next in line to the previously registered template. Weese teaches a method of registering a series of images (column 1, lines 1-2) including determining a previously registered template(column 3, lines 64-65) ; and comparing the input image with the template next in line to the previously registered template (column 3, line 67 and column 4, lines 1-2). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the method of registering a series of images of Weese to the method of identifying and tracking motion

of Hipp as modified by Wetro "for the registration of arbitrary temporally successively acquired images of the same object for which a high accuracy is required in order to compensate notable for motion of the object" (column 6, lines 30-35).

6. Claims 15-17, 19, 28-30 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hipp by (US Patent Application No.: 2003/0086596) in view of Baker (Pub No.: 2003/0026758).

As to claim 15, Hipp does not teach wherein the medical procedure comprises directing a radiation beam to an object. Baker teaches a method for monitoring a target area ([0004], lines 1-2) including the step of directing a radiation beam to an object ([0030], lines 3-4). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the method for monitoring a target area of Baker to the identifying and tracking motion of Hipp as modified by Wetro for tracking changes in position of a target area in real time ([0013], lines 3-6).

As to claim 16, note the discussion above, Baker teaches a method wherein the performing the medical procedure comprises changing a direction of a radiation beam in response to the determined position (see [0034], lines 8-12, where the direction of the radiation beam is changed in response to the changed in the position of the target region).

As to claim 17, note the discussion above, Baker teaches the method wherein

the performing the medical procedure comprises gating a delivery of the radiation beam in response to the determined position (see [0034], lines 12-15, where the radiation beam is turned on or off in response to a changed in the position of the target region).

As to claim 19, note the discussion above, Baker teaches the method wherein the at least a part of an animal body comprises a lung tissue ([0037], line 7).

Claim 28 differ from claim 15 only in that claim 28 is a system claim whereas, claim is 15 method claim. Thus, claim 28 is analyzed as previously discussed with respect to claim 15 above.

Claim 29 differ from claim 16 only in that claim 29 is a system claim whereas, claim is 16 method claim. Thus, claim 29 is analyzed as previously discussed with respect to claim 16 above.

Claim 30 differ from claim 17 only in that claim 30 is a system claim whereas, claim is 17 method claim. Thus, claim 30 is analyzed as previously discussed with respect to claim 17 above.

Claim 37 differ from claim 15 only in that claim 37 is a computer readable medium claim whereas, claim is 15 method claim. Thus, claim 37 is analyzed as previously discussed with respect to claim 15 above.

Claim 38 differ from claim 16 only in that claim 38 is a computer readable medium claim whereas, claim is 16 method claim. Thus, claim 38 is analyzed as previously discussed with respect to claim 16 above.

Claim 39 differ from claim 17 only in that claim 39 is a computer readable medium claim whereas, claim is 17 method claim. Thus, claim 39 is analyzed as previously discussed with respect to claim 17 above.

7. Claims 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hipp by (US Patent Application No.: 2003/0086596) in view of Black et al (US Patent No.: 6,526,156).

As to claim 58, Hipp does not specifically disclose the method wherein the act of enhancing is performed without specifically identifying the moving object. Black discloses a method for tracking an object (column 1, lines 14-16) wherein the act of enhancing is performed without specifically identifying the moving object (see column 14, lines 60-67). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the method for tracking an object to the identifying and tracking motion of Hipp as modified by Wetro to track and identify appearance changes of an object through a sequence of images, thus the rigid and articulated motion of the object can be tracked as it moves through the sequence of images (column 4, lines 43-53).

Claim 59 differ from claim 58 only in that claim 59 is a system claim whereas, claim is 58 method claim. Thus, claim 59 is analyzed as previously discussed with respect to claim 58 above.

Claim 60 differ from claim 58 only in that claim 60 is a computer readable medium claim whereas, claim is 58 method claim. Thus, claim 60 is analyzed as previously discussed with respect to claim 58 above.

8. Claims 40, 43, 46, 47-49, 50, 53 and 56 are are rejected under 35 U.S.C. 103(a) as being unpatentable over Holliman et al (US Patent No.: 6,075,557) in view of Hipp (US Patent Application No.: 2003/0086596).

As to claim 40, Holliman discloses a method of monitoring a position of an object (image tracking method, column 1, lines 5-6), comprising: providing a reference image of the object (45, template, see Fig 12); acquiring a first image of the object (48, acquire image, see Fig 12); determining a first composite image based on the reference image and the first image (49, match template and acquired image) by performing a subtraction function (note that a differential movement method is used, see column 11, lines 33-38); and determining whether the object has moved based at least on the first composite image (50, determine if object has moved base on a threshold value, see Fig , see Fig 12), wherein the act of determining whether the object has moved comprises using a contrast associated with the first composite image (note that the motion is

detected using a deferential method, thus the motion is determined using the contrast resulting from that difference, see column 12, lines 33-36). However, Holliman does not expressly disclose wherein the first image is a composite image (see [p][[0040], lines 4-11). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added method of identifying and tracking motion of Hipp to the image tracking method of Holliman for accessing the motion of an object by identifying it position in an initial frame and tracking it's position in subsequent frames ([0102] lines 5-10).

As to claim 43, Holliman teaches a method further comprising: acquiring a second image of the object; determining a composite image based on the second image and the reference image; and determining whether the object has moved based at least on the second composite image (note that the matching method is iterative, see Fig 12).

As to claim 46, Holliman teaches the method wherein the object comprises at least a portion of an animal body (see Fig 13).

As to claim 47, note the discussion above, Hipp teaches the method wherein the at least a portion of an animal body comprises a bone (e.g. vertebrae; [0027], line 3).

As to claim 48, note the discussion above, Hipp teaches the method wherein the first image comprises a fluoroscopic image (e.g. radiographic images; [0042], lines 9).

As to claim 49, Holliman teaches the method further comprising enhancing a moving object in the first image (see column 16, lines 19-49, where Prewitt edge detectors are used to enhance the object).

Claim 50 differ from claim 40 only in that claim 50 is a system claim whereas, claim is 40 method claim. Thus, claim 50 is analyzed as previously discussed with respect to claim 40 above.

As to claim 53, note the discussion of claim 40 above, all the limitations are address except the limitation "a computer readable medium having a set of stored instructions" are additively recited in the preamble. Holliman teaches a computer readable medium (39, memory) having a set of stored instructions.

Claim 56 differ from claim 49 only in that claim 56 is a computer readable medium claim whereas claim is 49 method claim. Thus, claim 56 is analyzed as previously discussed with respect to claim 49 above.

9. Claims 41, 42, 44, 45, 51, 52, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holliman et al (US Patent No.: 6,075,557) in view of Hipp (US Patent Application No.: 2003/0086596) further in view of Lo et al (US Patent No: 5,109,435).

As to claim 41 Holliman did not teach the method further comprising determining a first value associated with a contrast of the first difference image. Lo teaches a method of detecting moving objects (column 1, lines 10-11) that includes determining a first value (median value, column 1, line 63) associated with a contrast of the first difference image (note that the median value calculated from the pixel values in registered images and is therefore associated with the contrast, column 1, lines 63-65). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the method of detecting moving objects of Lo to the image tracking method of Holliman as modified by Hipp for determining the position of a moving object especially in cases where background cluster is present (column 1, lines 55-58).

As to claim 42, note the discussion above, Lo teaches the method wherein the determining whether the object has moved is performed based on the first value (note that the median pixel values are subtracted from image frames to form a difference image, then thresholds are applied to the difference image to determine the position of a moving object, columns 1, line 65-68 and column 2, lines 1-2).

As to claim 44, note the discussion above, Lo teaches the method of further comprising determining a second value associated with a contrast of the second composite image (see column 7, lines 28-32, where a new median value is calculated for an additional frame).

As to claim 45, note the discussion above, Lo teaches the method wherein the determining whether the object has moved is performed based on the second value (note that this new median value is used to determine the position of the moving object, column 7, lines 33-34).

Claim 51 differ from claim 41 only in that claim 51 is a system claim whereas, claim is 41 method claim. Thus, claim 51 is analyzed as previously discussed with respect to claim 41 above.

Claim 52 differ from claim 42 only in that claim 52 is a system claim whereas claim is 42 method claim. Thus, claim 52 is analyzed as previously discussed with respect to claim 42 above.

Claim 54 differ from claim 41 only in that claim 54 is a computer readable medium claim whereas, claim is 41 method claim. Thus, claim 54 is analyzed as previously discussed with respect to claim 41 above.

Claim 55 differ from claim 42 only in that claim 55 is a computer readable medium claim whereas, claim is 42 method claim. Thus, claim 55 is analyzed as previously discussed with respect to claim 42 above.

As to claim 57, Holliman teaches the method wherein the reference image and the first image are obtained from a same imaging direction relative to the object (note that the first image is captured immediately are the template image thus the images are capture from a same imaging direction, see column 6, lines 23-52).

10. Claims 64-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holliman et al (US Patent No.: 6,075,557) in view of Hipp (US Patent Application No.: 2003/0086596) further in view of Abe (US Patent No.: 5,134,472).

As to claim 64, Holliman in view of Hipp does not teach the method of, wherein the act of determining whether the object has moved does not require a determination of an amount of movement by the object. Abe disclose a method for detecting a moving object (see column 1, lines 8-9) wherein the act of determining whether the object has moved does not require a determination of an amount of movement by the object (see column 1, lines 43-55). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the method of detecting moving objects of Abe to the image tracking method of Holliman as modified by Hipp to correctly detects a moving image within an image area corresponding to a moving

object within the image area while avoiding erroneous indications of moving objects within an image area (see column 1, lines 43-53).

Claim 65 differ from claim 64 only in that claim 65 is a system claim whereas claim is 64 method claim. Thus, claim 65 is analyzed as previously discussed with respect to claim 64 above.

Claim 66 differ from claim 64 only in that claim 64 is a computer readable medium claim whereas claim is 64 method claim. Thus, claim 66 is analyzed as previously discussed with respect to claim 64 above.

(10) Response to Argument

On pages 11-12 of the Appeal Brief, Appellant argues that Hipp does not teach the act of enhancing is performed such that an image of the moving object is enhanced relative to an image of a relatively stationary object if the moving object moves relative to the stationary object as recited by claims 1, 22 and 31. Appellant specifically noted that "the act of enhancing is conditioned upon whether the object moves or not (note the limitation "if")" (see section VII of Appeal Brief, [p][003]).

In Reply: The claims seem conditional, however, the claim is not because the condition statement didn't include the word **only** which means the claims cover when the object moves as well as when the object does not move. This is because the claim recites relatively stationary object means that the object may be stationary or slightly

moving. This means that even the moving object may seem as if it's not moving (although it is moving) because of its relation to the relatively stationary object (i.e. in a case where the relatively stationary object is slightly moving). Also, the claim recites "a moving object" which implies that the object is always moving. Therefore, the conditional statement does not add any meaning or weight to the claims because a moving object by definition has to be moving; if it's stationary, it not a moving object. Moreover, the entire image is being enhanced not just the moving object. With this in mind, Hipp clearly teaches wherein the act of enhancing is performed such that an image of the moving object is enhanced relative to an image of a relatively stationary object if the moving object moves relative to the stationary object (see [p][0035, [0040] and Fig 4). Lastly, the objective of the present invention is to detect the position of a moving object by first detecting the moving object then tracking the object so that its position is known at all times. Hipp clearly does this as the disclosed method identifies and tracks the motion of vertebra.

On page 13 of the response, Appellant argued that Holliman does not teach a first composite image as recited by claims 40, 50 and 53; instead Holliman teaches a matching between a template and an input image. Appellant further argued that, Holliman's differential movement method does not result in a composite image.

In Reply: The Examiner respectfully disagrees because Holliman clearly teaches that differential method (see column 11, lines 33-38) is used to create a composite image between the template (note that the template is an image) and the input image (49, see Fig 12- match template and acquired image). Assume arguendo, even if

Holliman does not disclose a composite image, Hipp teaches creating a composite image by averaging multiple images (see [p][0040], lines 4-11). Moreover, creating a composite image is one of the most basic image processing methods and would have well within the knowledge of one of ordinary skill in the art.

On pages 14-15 of the response, Appellant argues that neither, Holliman Hipp nor Abe alone or in combination teach "that the act of determining whether the object has moved does not require a determination of an amount of movement by the object" as recited by claims 64 and 66. Appellant also argues neither, Holliman Hipp nor Abe alone or in combination disclose "that the means for determining whether the object has moved is configured to determine whether the object has moved without determining an amount of movement by the object" as recited by claim 66. Applicant also characterized Abe as teaching determining an **amount** of movement of an object in column 8, lines 31 and claim 7.

In Reply: The Examiner disagrees with the characterization of Abe, as the cited portion of Abe is clearly taken out of context. A reading of the entire paragraph shows that a calculation of the height of a window and the previous columns show that the calculations Appellant mentions (YEf-YEn, see page 15, lines 9 of Appeal Brief) is used for correcting a window height that was used for detecting the moving object. There is no mention of calculating an amount of motion as stated by Appellant. In fact Abe clearly teaches determine the motion of an object without determining an amount of motion in column 7, lines 22-35, Fig 8A and Fig 5G where an oblique line with varying angles is used to determine the profile of a moving object.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/ANDRAE S ALLISON/

Examiner, Art Unit 2624

Conferees:

/Vu Le/
Supervisory Patent Examiner, Art Unit 2624

/Bhavesh M Mehta/
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